



Live-cell mass profiling: an emerging approach in quantitative biophysics.

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Public Summary:

Cell mass, volume and growth rate are tightly controlled biophysical parameters in cellular development and homeostasis, and pathological cell growth defines cancer in metazoans. The first measurements of cell mass were made in the 1950s, but only recently have advances in computer science and microfabrication spurred the rapid development of precision mass-quantifying approaches. Here we discuss available techniques for quantifying the mass of single live cells with an emphasis on relative features, capabilities and drawbacks for different applications.

Scientific Abstract:

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